Minimum Cycle Bases and Surface Reconstruction

(Abstract)

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I report on recent work on minimum cycle basis in graphs and their application to surface reconstruction. The talk is based on joint work with C. Gotsmann, R. Hariharan, K. Kaligosi, T. Kavitha, D. Michail, K. Paluch, and E. Pyrga. I refer the reader to [KMMP04, KM05, HKM, GKM⁺, MM05, Kav05] for details.

References

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- [KM05] T. Kavitha and K. Mehlhorn. A polynomial time algorithm for minimum cycle basis in directed graphs. In *STACS*, volume 3404 of *LNCS*, pages 654–665, 2005. www.mpi-sb.mpg.de/~mehlhorn/ftp/DirCycleBasis.ps.
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- [MM05] K. Mehlhorn and D. Michail. Implementing minimum cycle basis algorithms. In *Experimental and Efficient Algorithms: 4th International Workshop, WEA 2005*, volume 3503 of *LNCS*, pages 32–XXX, 2005. www.mpi-sb.mpg.de/~mehlhorn/ftp/CycleBasisImpl.pdf.